USB I/O 8820 Manual

June/2012

Purpose :

By using PC to sense smoke , gas or door status or to control power on/off ?

Here is an easy way to do with USB I / O 8820

No need extra power , No need to open the PC case & No need to write program yourselves .

8820 comes with 2 DI for sensor and 2 DO for relay control. Simply just plug and play.

USB I/O 8820 can start collect information and control power through PC easily.

Application for automation and hobbyist at Home /Office /Commercial/Manufactory & A/V signal switch .

Hardware Advise:

Please use Windows system : WIN XP , Win 7 or above and USB 2.0 system.

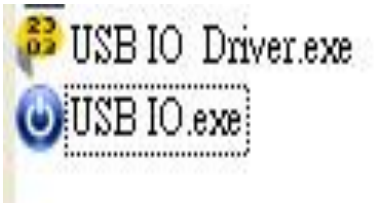
Software Installation :

Step1 : First, install the driver - USB IO Driver.exe (As picture P1) in CD.

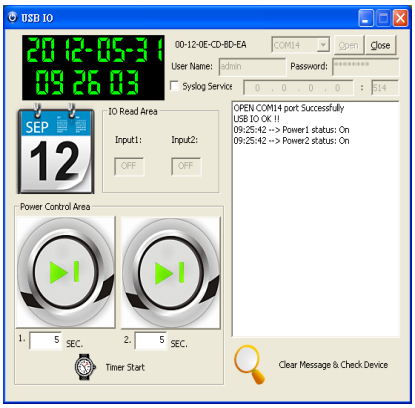
Step 2 : After installed the driver , then connect the USB port of 8820 to the USB port of your PC.

Step 3 : Then execute our software USBIO.exe to see the interface as pictures P2 .

P1



P2



IO Instruction :

- USB : This is USB 2.0 . Please connect this USB to PC for power and data transfer.

- 1 & 2 : These are LED lights to show each Relay status. LED light on as relay connect .
  LED light off as relay disconnect

- D/I : The connector of 2 sets DI (All as Dry contacts or Wet Contact)

  * Dry contacts / Sink mode / Resistance input :

    ON : 200 ohm~ 0 ohm

    OFF: 500 ohm ~ ∞

  * Wet Contact / Source mode / Voltage Input / Negative TTL

    ON : 0 V ~ 1.7V

    OFF : 2.8 V ~ 5V

- Out1 & Out 2 : These are 2 sets DO (relay) - digital negative TTL gate output (All connect as NC or NO),

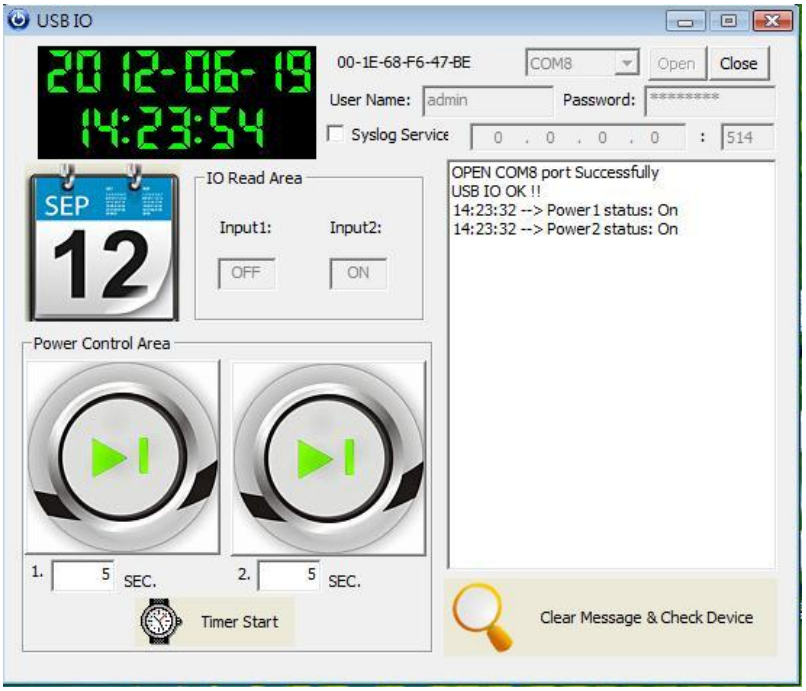
  Max Voltage per port : 12VAC. 24VDC

  Max Current per port : 2A AC/DC

When that bit is high then the associated relay will conduct. A Relay has 3 joints, when driven by a voltage source the center joint will connect with joints at sides to form a open or close circuit respectively. If you are new user to relays you should use a multi-meter to check its operation first. Relays can be used as a switch to control low power appliance such as light, fan, radio etc. Due to current limitation of relays, do not allowed instant current to be larger than 2A. Relays and electric appliances do not support fast ON/OFF switching, so there is limit time gap for 5 sec in our software.

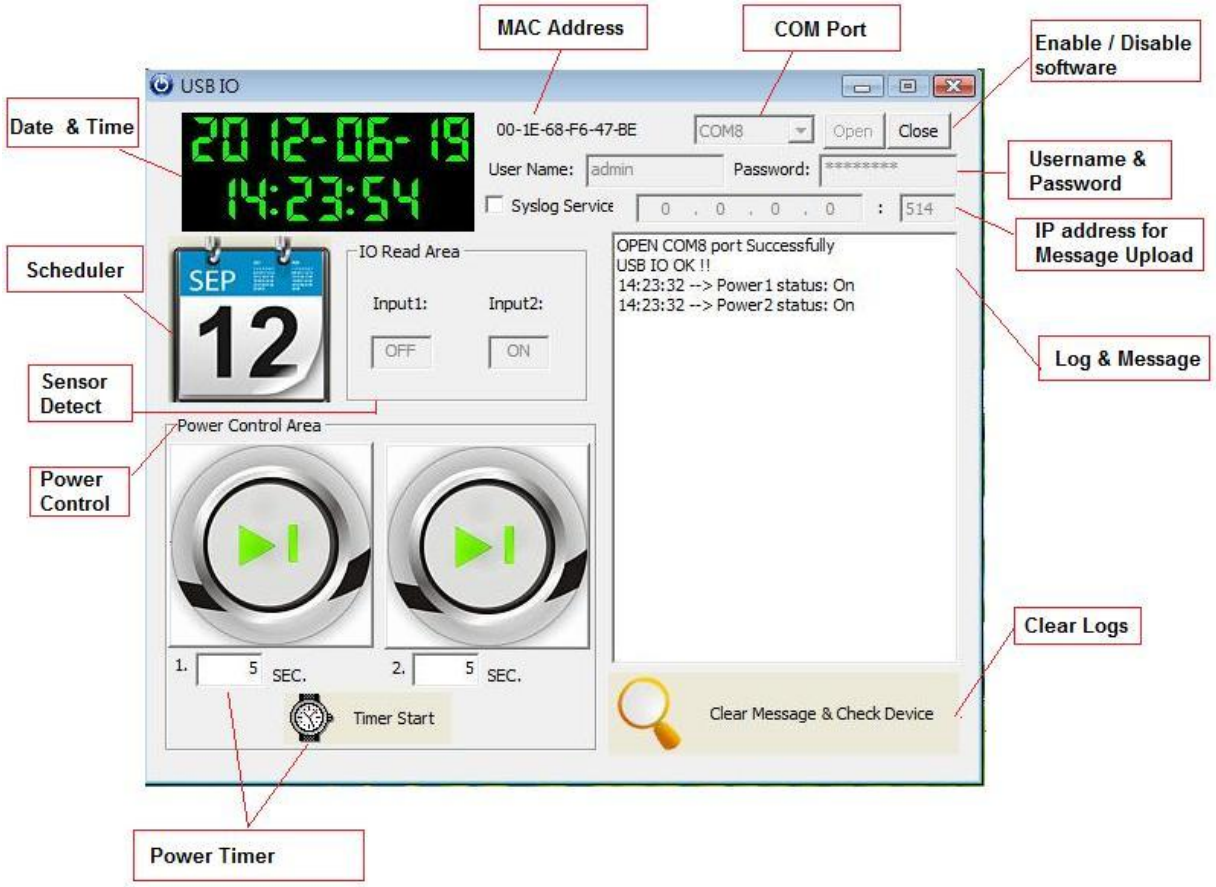
Control Program:

You can connect sensor device (DI device) and control the power of your DO device. Now you are ready to control this module with following program :



Please refer complete software information in manual (in CD)

Control Program interface:

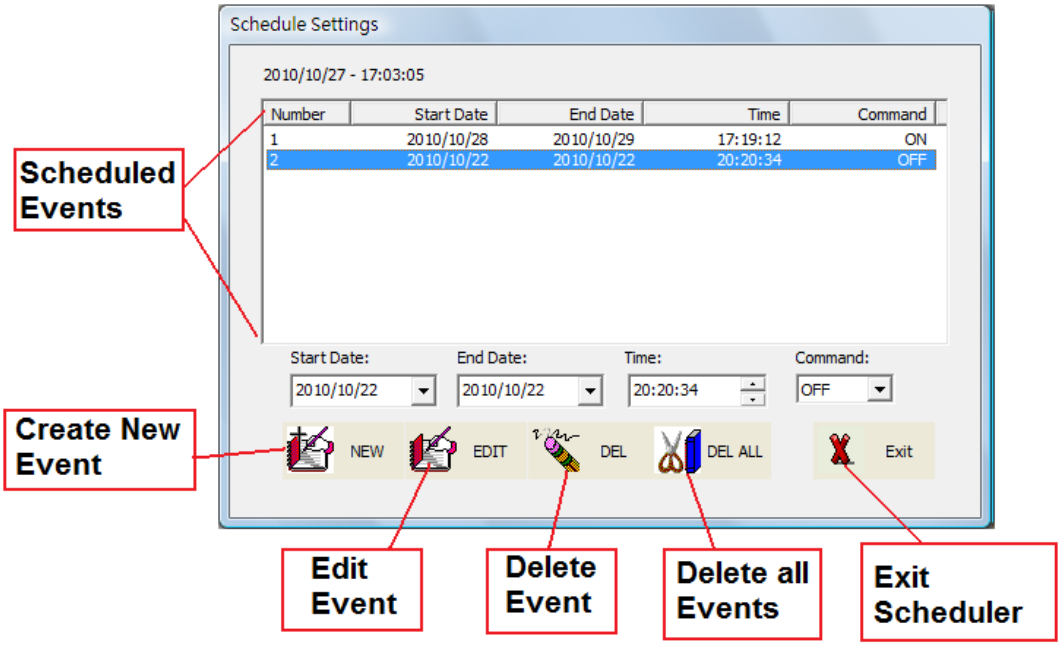


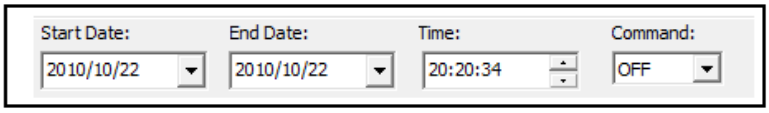
Date & Time

The date and time section will automatically synchronize the time and date with the computer that is being used. This time will be used to setup the scheduler for the device so that it can correctly turn on and off devices at the desired times.

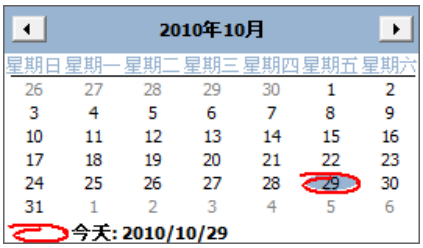
Scheduler

The scheduler allows you to schedule events when your device will turn on / turn off. This creates a very powerful tool, in that all your power needs can become automated. There will be more detailed information below regarding this section of the software.





Start Date: Choose the date of when you want the device to turn on or off. Simply type in the date you would like or click on the dropdown menu to present the calendar. Then simply click on the desired date.



End Date: Choose the date when you want the event to stop happening.

Time: Select the time when the device will activate.

Command: The action that is desired during the specified date and time.

Create Event

To create a new event, follow the following steps:

1.) Select a **Start date** of when you would like to activate the command.

2.) Then select an end date. If you select a end date a few days later this means the device will turn on everyday at the desired time until the end date has been reached.

3.) Then select a Time and for the command choose on or off

4.) Once everything has been set make sure to hit the New button to add this new event to your scheduler

Edit Event

To edit an existing event, follow the following steps:

1.) Click on the event located in your scheduled events section that you would like to edit

2.) Then you change the values the different fields for the **Start date, End date, Time, & Command.**

3.) Once you have edited the event click on the Edit Event button to save the settings

Delete Event

To delete an existing event, follow the follow steps:

1.) Select the event that you would like to remove from your scheduled events section

2.) Then hit the delete event button to delete the event.

Delete All

To delete all scheduled events, follow the follow steps:

1.) Click on the delete all button to delete all the fields in the scheduler.

2.) The program will ask you to reconfirm before deleting all scheduled events.

Power control - On / Off Controls

The on / off controls allows you to directly control the device. From here you can instantly turn on / turn off your connected device. To the right of this feature you will see a log file which will show you the current status of the device.

Basically click on the picture to activate or turn off the relay.

Off	On

- Note: There is a 5 second period between each time you can turn on or off the device.
  If you click to fast the error message you will receive will look like this.

To the right side of the program you will see a message log that will keep track of power statuses being used. It will report the time and status so that you can easily keep track of your power status.